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# Transforming National Space Security: Enabling DoD and Intelligence Community Defensive Space Control Collaboration

**BG Jeffrey C. Horne, USA**  
**Deputy Director for Mission Support**  
**National Reconnaissance Office**  
**Chantilly, Virginia**

Today's national security environment is characterized by rapidly evolving and fleeting intelligence targets in an increasingly challenging operational environment. As you would imagine, the Department of Defense (DoD) and Intelligence Community (IC) are working to counter these rapidly changing threats and continuously assess methodologies, tools, and procedures. Ultimately, we must provide timely, value added, target quality information to our toughest customers—our warriors, leaders, and analytic support customers. DoD and IC space assets, working in concert with airborne and ground systems, are vital components of the overall collection architecture that provides the nation global situational awareness, intelligence, surveillance, and reconnaissance (ISR), targeting information, and critical strategic indications and warning. America's combined space architecture gives national policy-makers and military leaders, analysts, and operators timely and responsive access to denied areas, unparalleled collection capabilities, and precision data at little risk to human life. The DoD, IC, and increasingly, commercial overhead collection systems, further provide critical enabling capabilities when operating in concert with a wide realm of intelligence partners.

Responding to operational challenges and constrained budgets, DoD and IC space operations communities are transforming the way they deploy and operate in space, fuse the information that transits space-based platforms, and protect America's space architecture. That architecture not only consists of DoD, IC, and commercial industry operated orbital assets, but also includes a broad and increasingly networked array of communications, ground processing, and dissemination systems. This architecture promotes operational flexibility, but creates many critical interdependencies vulnerable to threats from America's adversaries. The successful Chinese anti-satellite test in January 2007 demonstrated that lesson to the national security space community. This watershed event reminded us that space can no longer be seen as a sanctuary, and that the nation's space-based capabilities support more than military and intelligence operations, but also commercial, scientific, and global communications as well. It also highlighted the need to accelerate joint efforts to improve shared situational awareness, cross-train DoD and IC space operators, and jointly develop new tools, analytic techniques, and operating procedures to protect America's space-based systems. One tangible sign that the DoD and

IC communities are moving in this direction is the growing relationship between the National Reconnaissance Office (NRO) National Reconnaissance Operations Center (NROC) and the US Strategic Command (USSTRATCOM) Joint Space Operations Center (JSPOC).

In late 2006, senior DoD and IC leaders signaled their intent to integrate their respective space capabilities to enhance our overall capabilities and provide enhanced situational awareness activities. Dr. Donald M. Kerr, director NRO (DNRO); and General James Cartwright, commander, USSTRATCOM, signed a memorandum-of-agreement "dual-hatting" the NRO deputy director for Mission Support (DDMS) as the deputy commander (DCDR) of STRATCOM's Joint Functional Component Command for Space (JFCC-SPACE). The agreement states, "due to the critical importance of the JFCC-SPACE mission, it is essential that this organization be functionally connected with the NRO." Dr. Kerr and General Cartwright further defined the relationship in a March 2007 agreement that formalized the "dual-hat" role.

Today, I am privileged to support Lt Gen William L. Shelton and the DNRO as we accomplish our joint Space Mission sets. Specific task include:

- Serve as the senior military advisor to the director of the NRO for Operational Matters and ensure our operational support to DoD, IC, and other customers meets their operational needs.
- Ensure that NRO activities provide effective program and technical interface and optimize support to the DoD, the IC, and other agencies as directed.
- Maintain the program interface and operational support activities within the NRO, and among the defense agencies, the military departments, the services, the combatant commands, the IC, and other organizations as directed.
- Recommend processes and procedures yielding common space situational awareness, rapid assessment of events affecting space systems and operations, and if required, synchronizing responses to these events between the DoD and NRO space activities and supporting components.
- Ensure a coordinated approach to identifying/fielding capabilities and advocating for resources to support warfighting needs for space and ISR, and assist in providing space capabilities to the combatant commanders and the IC.

A March 2008 instruction from DNRO Scott F. Large gave us further responsibility for creating and maintaining NRO integrating operations and assured processes for defensive counter-space operations, flight safety issues, NRO contingency ex-

ercises, USSTRATCOM JFCC-SPACE operations, and space situational awareness operations. My dual oversight of these functions should better enable continuity of operations across the IC and DoD joint space operations environment.

We presently have multiple components that conduct space protection and situational awareness activities: the NROC, JSpOC, Wings, and Operations Centers. The NROC, originally created in response to the September 11<sup>th</sup> terrorist attacks, has evolved into a capability that provides enterprise system status and awareness, not only to the NRO leadership, but also to mission partners, combatant commanders, IC partners, and other US government agencies. The NROC conducts survivability assessments, flight safety operations, and applies IC threat reporting to support defensive space control. It also provides us with critical support as the NRO focal point for special access programs in support of NROC mission elements. Under the Unified Command Plan, the JFCC-SPACE is the USSTRATCOM element responsible for planning and conducting DoD space operations. In this role, the JSpOC undertakes space force enhancement, space control, on-orbit operations, and force application of DoD space assets. Successful accomplishment of these missions hinges on USSTRATCOM's ability to understand and remain constantly aware of both the terrestrial and space threat environments in much the same way as the NRO leadership requires situational awareness of IC space assets.

In the last several months, we have made significant strides to further the relationships, not only between DDMS and JFCC-SPACE, but also between the NRO and USSTRATCOM. Since late 2006, the two organizations have undertaken several activities to improve information sharing and create mutual backup capabilities. Today we jointly certify watch officers, install tool suites in each other's facilities, exchange representatives to their respective locations to facilitate daily communications, and conduct exercises to reinforce roles and responsibilities.

The recent shoot down of a disabled US intelligence satellite highlighted the improved relationship between the NRO and USSTRATCOM, and pointed the way forward to further improving their mutual capabilities. During Operation Burnt Frost, the two organizations collaborated in America's "first-ever" attempt to use a missile to intercept a satellite in its final days before atmospheric reentry. Both organizations leveraged their relationships with other IC and DoD agencies, as well as their intimate knowledge of their own organization's abilities to resolve the situation. This event highlighted the fact that while neither organization has full knowledge of, or access to, all of America's resources, when linked virtually, they can bring a formidable complement of assets to bear on the toughest national security problems. Together, the NROC and JSpOC are the hub of an unprecedented collaboration of more than two dozen DoD, IC, and federal organizations. The overall experience, planning abilities, dedication, and hard work from operations centers on opposite sides of the country resulted in a successful worldwide effort to prevent the loss of human life that could have resulted from the uncontrolled reentry of a satellite containing unspent toxic fuel.

Operation Burnt Frost and various exercises have given us the opportunity to improve DoD and IC space protection capabilities and reaffirm our commitment to these national security priorities. In particular, the DoD and IC space communities need to significantly improve their respective Space Situational Awareness capabilities. We need better tools and technological capabilities to track space objects, a more robust analytic cadre trained and equipped with improved processing and modeling and simulation tools, enhanced ability to share real-time status of both DoD and IC space assets, and better concept of operations and tactics, techniques, and procedures to support rapid decision-making. We also require the means to communicate transparently with foreign mission partners, the broader international community, and even the media as appropriate.

As the two communities work together to craft a joint space protection strategy and build and equip our communities to better support each other, the DDMS/DCDR JFCC-SPACE dual-hat relationship and the corresponding work of the NROC and JSpOC reflect important first steps in this shared responsibility to protect the nation's vital space interests.

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**BG Jeffrey C. Horne** (BS, Business Administration, Ohio State; MS, Information Systems Management, United States Naval Postgraduate School; MSST, Security and Strategic Studies, US Army War College) is currently deputy commander, Joint Functional Component Command for Space, US Strategic Command and is the deputy director for Mission Support, National Reconnaissance Office.

Brigadier General Horne has served in the US Strategic Command and the National Reconnaissance Office since April 2007. From January 2006 to December 2007, he served in Iraq under Operation Iraqi Freedom as effects coordinator, Multi-National Corps-Iraq. From July 2004 to January 2006, he was deputy commanding general for operations, United States Army Space and Missile Defense Command/United States Army Forces Strategic Command, Peterson AFB, Colorado. He also worked on the National Missile Defense Program as training and doctrine command systems manager, United States Army Space and Missile Defense Command, Arlington, Virginia, from June 2000 to June 2004.